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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/717,831

11/20/2003

Hironori Kakiuchi

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12/11/2006

SEED INTELLECTUAL PROPERTY LAW GROUP PLLC

701 FIFTH AVE

SUITE 5400

SEATTLE, WA 98104

EXAMINER

ANGEBRANNDT, MARTIN J

ART UNIT

PAPER NUMBER

1756

DATE MAILED: 12/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/717,831

Applicant(s)

KAKIUCHI ET AL.

Examiner

Martin J. Angebrannt

Art Unit

1756

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10/02/06 and 11/03/06.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

Art Unit: 1756

1. The response of the applicant has been read and given careful consideration. Response to the arguments and amendments are presented after the first rejection to which they are directed. Rejections/objection of the previous office action, not repeated below are withdrawn based upon the arguments and amendments of the applicant. The certified translation has been received and reviewed by the examiner and the applicant is accorded a date of 11/22/2002 for the claimed invention.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uno et al. '239.

Uno et al. '239 in the example describe a polycarbonate substrate, a silica-ZnS lower dielectric layer, GeCrON interface layer, a GeTeSb recording layer, a GeCrON interface layer, an AlON layer and a Au reflective layer. The sputtering process is also described. (14/ 62-15/65). The use of multilayered optical recording media is disclosed with respect to figures 7 and 8 and the text in column 17, but use a GeCrN interfacial layers. The use of Ti-O-N, Ta-O-N, Ge-O-N, Cr-O-N, Si-O-N, Al-O-N, Nb-N-O, Mo-O-N, Zr-O-N for interface layers 4 and 6 (8/21-46).

It would have been obvious to one skilled in the art to modify the media in the medium described with respect to figure 8 by using other interface layer materials, such as Ti-O-N, Ta-O-

Art Unit: 1756

N, Ge-O-N, Cr-O-N, Si-O-N, Al-O-N, Nb-N-O, Mo-O-N, Zr-O-N, in place of the GeCrN layer used with a reasonable expectation of forming a useful multilayered optical recording medium realizing the benefits of the interfacial layers.

The position of the examiner is that the use of these layers, specifically the TaON or TiON materials would inherently have the higher thermal conductivity than the silica-ZnS or AlON layers. The applicant argues as if the claims precluded the presence of other layers, or the presence of low and high thermal conductivity layer on both sides of the recording medium. This is not the case. The rejection stands.

4. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shuy et al. '160, in view of Sakaue et al. '587.

Shuy et al. '160 teach in embodiment 4, a medium comprising a polycarbonate substrate, a ZnS-SiO<sub>2</sub> layer, a transparent Si first recording layer, a reflective Si-Au second recording layer and a ZnS-SiO<sub>2</sub> layer. The ZnS-SiO<sub>2</sub> layers are thermal manipulation layers [0030]. The reflective recording layer may be Ag, Al, Au, Pt, U, IN, Sn, W, Ir, Re, Rh or Ta [0027]. The transparent recording layer may be Si, Ge, GaP, GaAs, InAs, ...[0026].

Sakaue et al. '587 in the recording medium of working example 1, where Ta<sub>2</sub>O<sub>5</sub> sputtered in a mixture of Ar and N<sub>2</sub> to form the barrier layer [0061] between the recording layer and the reflective layer or dielectric layers. [0036,0054-0062]. The use of other materials including GeON, SiON or AlON in place of the TaON is disclosed. [0068]. See also example 3, and the examples described in table 3 [0079-0089]. The use of TaON yields a better signal amplitude, reduced corrosion and improved thermal conductivity (heat dissipation). [0072-0073].

Art Unit: 1756

It would have been obvious to modify the cited examples of Shuy et al. '160 by using Ta-O-N as thermal manipulation layers in place of the ZnS-SiO<sub>2</sub> layers with a reasonable expectation of improving the performance characteristics based upon the disclosure of Sakaue et al. '587.

The examiner has interpreted the claims broadly, such that the plurality of information layers embraces a recording medium having a first recording layer and a second recording layer, including those which are adjacent and undergo alloying with each other until the claims conflict with this interpretation.(claims 4-24)

The applicant argues that only one recording layer is taught. This is not the case as each of the layers of the bilayer are each "a first recording film" and "a second recording film" as set forth in claims 4-6 and recite the same materials as Shuy et al. '160 describes for the reflective layer and the transparent layer. The applicant can obviate this rejection by folding the limitations of claim 4 into claims 1. This would preclude the examiner's interpretation and also obviate the rejection based upon Uno et al. above and might obviate at least some of the double patenting rejections. The thermal manipulation layers are dielectric materials and so the examiner's interpretation is proper and technically correct. As discussed above, the claims do not preclude the presence of other layers. The examiner also notes that the claims do not require separation of the plural recording films. The rejection stands.

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re*

Art Unit: 1756

*Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 1-3 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-43 of copending Application No. 10/406109 (US 2003/0190551) in view of Sakaue et al. '587 or Uno et al. '239.

It would have been obvious to modify the claimed optical recording media of 10/406109 by using Ta-O-N as the dielectric layers with a reasonable expectation of forming a useful optical recording medium based upon the disclosure of Sakaue et al. '587 or Uno et al. '239.

This is a provisional obviousness-type double patenting rejection.

The applicant notes the double patenting rejections and states that terminal disclaimers will be filed when any of these copending applications issues. The examiner notes this and points out that the control of the date of allowance and issue are not entirely at the discretion of the office, but are based upon the applicants response and the timeliness of payment of the issue fee, so the allowance of an application before another does not ensure that they will issue in order. These rejections stand.

7. Claims 1-3 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-36 of copending Application No. 10/423686 (US 2003/0202452) in view of Sakaue et al. '587 or Uno et al. '239

Art Unit: 1756

It would have been obvious to modify the claimed optical recording media of 10/423686 by using Ta-O-N as the dielectric layers with a reasonable expectation of forming a useful optical recording medium based upon the disclosure of Sakaue et al. '587 or Uno et al. '239.

This is a provisional obviousness-type double patenting rejection.

8. Claims 1-3 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-36 of copending Application No. 10/444172 (US 2003/0223351) in view of Sakaue et al. '587 or Uno et al. '239

It would have been obvious to modify the claimed optical recording media of 10/444172 by using Ta-O-N as the dielectric layers with a reasonable expectation of forming a useful optical recording medium based upon the disclosure of Sakaue et al. '587 or Uno et al. '239.

This is a provisional obviousness-type double patenting rejection.

9. Claims 1-3 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-40 of copending Application No. 10/425571 (US 2003/0231577) in view of Sakaue et al. '587 or Uno et al. '239

It would have been obvious to modify the claimed optical recording media of 10/425571 by using Ta-O-N as the dielectric layers with a reasonable expectation of forming a useful optical recording medium based upon the disclosure of Sakaue et al. '587 or Uno et al. '239.

This is a provisional obviousness-type double patenting rejection.

10. Claims 1-3 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-20 of copending Application No. 10/637407 (US 2004/0027973) in view of Sakaue et al. '587 or Uno et al. '239

Art Unit: 1756

It would have been obvious to modify the claimed optical recording media of 10/637407 by using Ta-O-N as the dielectric layers with a reasonable expectation of forming a useful optical recording medium based upon the disclosure of Sakaue et al. '587 or Uno et al. '239.

This is a provisional obviousness-type double patenting rejection.

11. Claims 1-3 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-20 of copending Application No. 10/608814 (US 2004/0038080) in view of Sakaue et al. '587 or Uno et al. '239.

It would have been obvious to modify the claimed optical recording media of 10/608814 by using Ta-O-N as the dielectric layers with a reasonable expectation of forming a useful optical recording medium based upon the disclosure of Sakaue et al. '587 or Uno et al. '239.

This is a provisional obviousness-type double patenting rejection.

12. Claims 1-3 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-31 of copending Application No. 10/748979 (US 2004/0152016) in view of Sakaue et al. '587 or Uno et al. '239.

It would have been obvious to modify the claimed optical recording media of 10/748979 by using Ta-O-N as the intermediate layers with a reasonable expectation of forming a useful optical recording medium based upon the disclosure of Sakaue et al. '587 or Uno et al. '239.

This is a provisional obviousness-type double patenting rejection.

13. Claims 1,2,4,5,7,8,10,11,13,14,16,17,19,20 and 22-23 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-20 of copending Application No. 10/684981 (US 2004/0076907) .



Art Unit: 1756

It would have been obvious to use the dielectric layers described in claims 1 and 2 in the claimed optical recording media of 10/684981, but having different compositions and including additives to the Cu layer (cl 4).

This is a provisional obviousness-type double patenting rejection.

14. Claims 1-24 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-19 of copending Application No. 10/818324 (US 2004/0202097) in view of Sakaue et al. '587 or Uno et al. '239.

It would have been obvious to modify the claimed optical recording media of 10/818324 by using Ta-O-N as the intermediate layers with a reasonable expectation of forming a useful optical recording medium based upon the disclosure of Sakaue et al. '587 or Uno et al. '239.

This is a provisional obviousness-type double patenting rejection.

15. Claims 1-9 and 19-24 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-24 of copending Application No. 10/808628 (US 2004/0191685) in view of Sakaue et al. '587 or Uno et al. '239.

It would have been obvious to modify the claimed optical recording media of 10/808628 by using Ta-O-N as the dielectric layers with a reasonable expectation of forming a useful optical recording medium based upon the disclosure of Sakaue et al. '587 or Uno et al. '239.

This is a provisional obviousness-type double patenting rejection.

16. Claims 1-24 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-19 of copending Application No. 10/764805 (US 2004/0157158) in view of Sakaue et al. '587 or Uno et al. '239.

Art Unit: 1756

It would have been obvious to modify the claimed optical recording media of 10/764805 by using Ta-O-N as the dielectric layers with a reasonable expectation of forming a useful optical recording medium based upon the disclosure of Sakaue et al. '587 or Uno et al. '239.

This is a provisional obviousness-type double patenting rejection.

17. Claims 1-24 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-26 of copending Application No. 10/613525 (US 2004/0052194) in view of Sakaue et al. '587 or Uno et al. '239.

It would have been obvious to modify the claimed optical recording media of 10/613525 by using Ta-O-N as the light transmission layers with a reasonable expectation of forming a useful optical recording medium based upon the disclosure of Sakaue et al. '587 or Uno et al. '239.

This is a provisional obviousness-type double patenting rejection.

18. Claims 1-24 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-26 of copending Application No. 10/612615 (US 2004/0004932) in view of Sakaue et al. '587 or Uno et al. '239.

It would have been obvious to modify the claimed optical recording media of 10/612615 by using Ta-O-N as the light transmission layers with a reasonable expectation of forming a useful optical recording medium based upon the disclosure of Sakaue et al. '587 or Uno et al. '239.

This is a provisional obviousness-type double patenting rejection.

Art Unit: 1756

19. Claims 1-24 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-26 of copending Application No. 10/792083 (US 2004/0174804) in view of Sakaue et al. '587 or Uno et al. '239.

It would have been obvious to modify the claimed optical recording media of 10/612615 by using Ti-O-N as one of the light transmission layers, in place of TiO with a reasonable expectation of forming a useful optical recording medium based upon the disclosure of Sakaue et al. '587 or Uno et al. '239.

This is a provisional obviousness-type double patenting rejection.

20. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

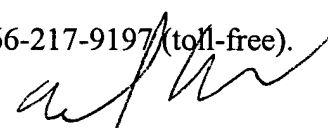
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Martin J. Angebrannndt whose telephone number is 571-272-1378. The examiner can normally be reached on Monday-Thursday and alternate Fridays.

Art Unit: 1756

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Martin J. Angebrannndt  
Primary Examiner  
Art Unit 1756

12/5/2006